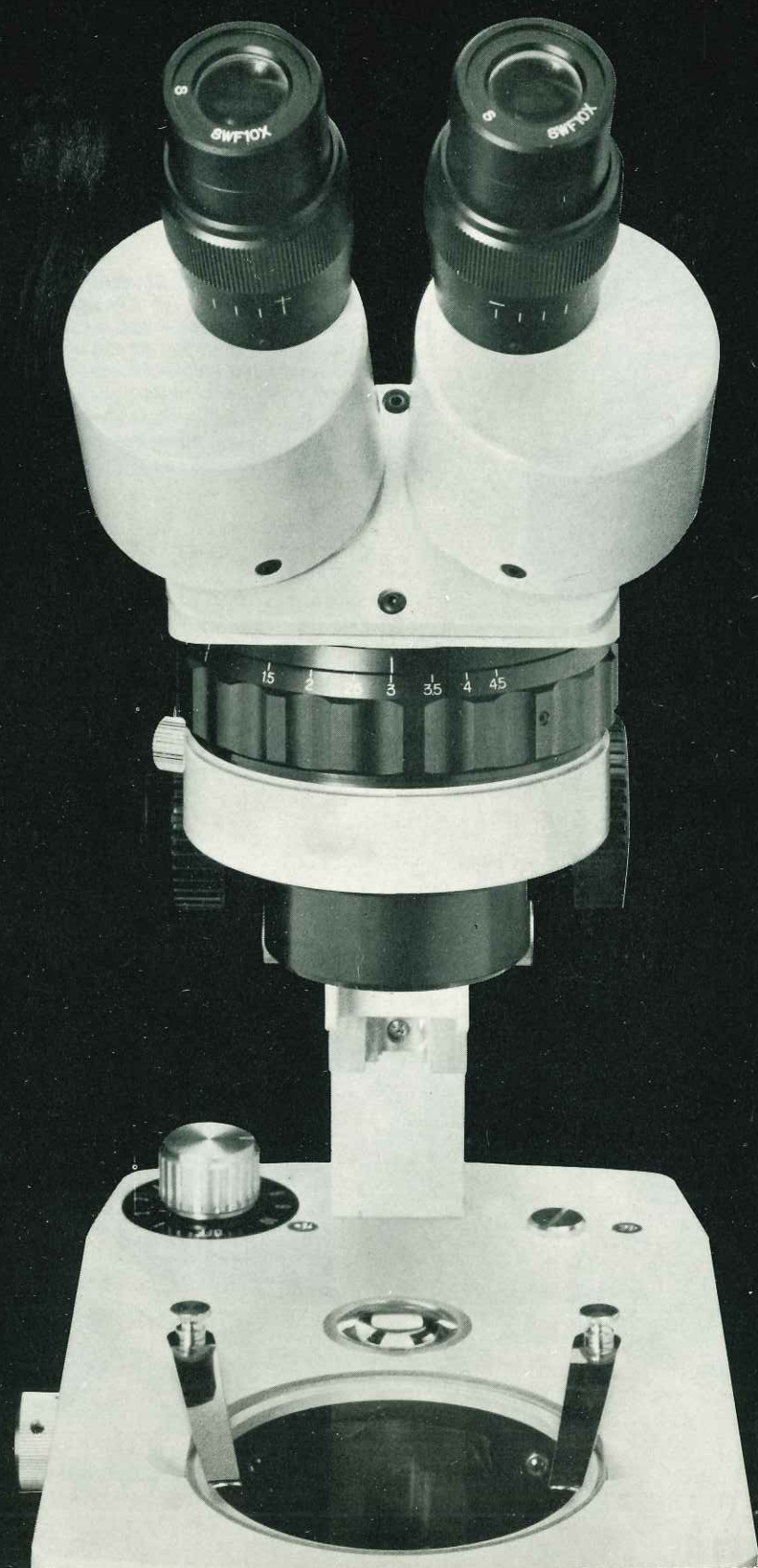


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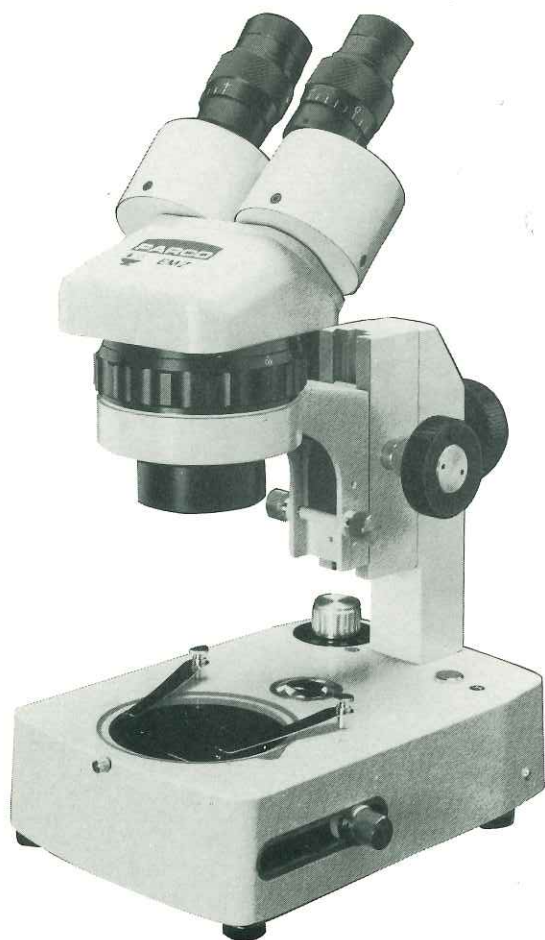
# PARCO EM SERIES

MODULAR STEREO MICROSCOPES



359-388

# EM Series



Model No. EMZ845-10L



Model No. EMT103-01B

## Optical Excellence

The Parco Widefield EM Stereo Series has been carefully designed and painstakingly engineered to give you, the educator, investigator, or quality control inspector, the magnification and critically sharp images needed to do your job more easily and more precisely than ever before. A simple turn of the precision smooth **Power Zoom Ring** and magnification is increased to give the exact image size you require. Once brought into focus the image will remain clear and sharp throughout the entire zoom range.

## Standard Features

Our EM Stereo Bodies are at an inclination of 45° for greater ease of observation, and have standard interpupillary width adjustment from 45mm to 75mm. A  $\pm$ Diopter Control is standard on both viewing tubes for all Zoom Bodies, and on the left viewing tube for the Fixed and Turret Bodies.

All Stands come equipped with the exclusive **Parco Slip Clutch System** to insure long life of the precision rack and pinion focusing system.

Each EM Stereo is also supplied with a pair of rubber eyecups and a vinyl dust cover.

## Modular Versatility

Universal in application, the EM Stereo Series is designed to keep pace with your changing needs. A full range of Fixed, Turret, and Zoom Power-Pod Bodies; Widefield and Super-widefield Eyepieces in all standard magnifications; Stands and Illumination Systems for any application; and other unique accessories allow you to individualize the EM Stereomicroscope to match your specific needs. It was never easier.

Talk to your Parco Factory Representative today, or call our Factory. We'll be happy to spend time with you designing an EM Series Stereomicroscope for your particular application.



Model No. EMZ846-10M w/181 Illumination

# Stereo Power Bodies

## EMF Fixed Power Bodies



**59A-0001. EMF-001.** Fixed 1X Power Body. For applications not requiring zoom capacities. Magnification: 10X to 20X with optional eyepieces.

**59A-0002. EMF-002.** Fixed 2X Power Body featuring twice the magnification range of the EMF-001 body. Magnification 20X to 40X with optional eyepieces.

## EMT Turret Power Bodies



**59A-0012. EMT-102.** Turret 1X and 2X Power Body. This body permits magnification tube to be varied by means of rotating the turret changer. Magnification: 10X to 40X with optional eyepiece.

**59A-0013. EMT-103.** Turret 1X and 3X Power Body. Magnification: 10X to 120X with optional eyepieces and amplifying lenses.

**59A-0024. EMT-204.** Turret 2X and 4X Power Body. Magnification: 20X to 160X with optional eyepieces and amplifying lenses.

## EMZ Widefield Zoom Bodies



**59A-0030. EMZ-130.** Widefield Zoom 1X to 3X Power Body. Our most economical zoom body for most industrial and educational applications. Continuous magnification from 10X to 120X with optional eyepieces and amplifying lenses.

**59A-0045. EMZ-845.** Widefield Zoom .8X to 4.5X Power Body. The wider zoom range of this body makes it the preferred zoom body for precise semi-conductor work and research. Continuous magnification from 2X to 180X with optional accessories.

**59A-0046. EMZ-846.** Trinocular Widefield Zoom .8X to 4.5X Power Body.

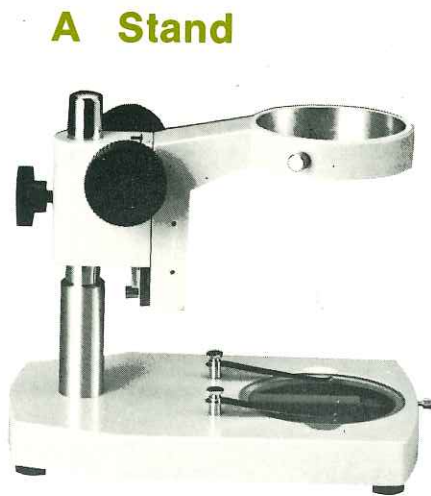
# Stereo Power Body Specification Tables

|         | Body & Objectives                          | EYEPIECES           |                |                     |                 |                     |                 |                     |                  | Working Distance |
|---------|--------------------------------------------|---------------------|----------------|---------------------|-----------------|---------------------|-----------------|---------------------|------------------|------------------|
|         |                                            | 10X Widefield       |                | 10X Super Widefield |                 | 15X Super Widefield |                 | 20X Super Widefield |                  |                  |
|         |                                            | Total Magnification | Field Diameter | Magnification       | Field Diameter  | Total Magnification | Field Diameter  | Total Magnification | Field Diameter   |                  |
| EMF     | Fixed 1X                                   | 10X                 | 19mm           | 10X                 | 23mm            | 15X                 | 15.3mm          | 20X                 | 11.5mm           | 130mm            |
|         | Fixed 2X                                   | 20X                 | 10mm           | 20X                 | 11.5mm          | 30X                 | 11.5mm          | 40X                 | 5.75mm           | 106mm            |
| EMT     |                                            |                     |                |                     |                 |                     |                 |                     |                  |                  |
|         | Turret 1X & 2X                             | 10X & 20X           | 19mm & 10mm    | 10X & 20X           | 23mm & 11.5mm   | 15X & 30X           | 15.3mm & 11.5mm | 20X & 40X           | 11.5mm & 5.75mm  | 106mm            |
|         | Turret 1X & 3X                             | 10X & 30X           | 19mm & 6.5mm   | 10X & 30X           | 23mm & 7.7mm    | 15X & 45X           | 15.3mm & 5.1mm  | 20X & 60X           | 11.5mm & 3.8mm   | 80mm             |
|         | Turret 2X & 4X                             | 20X & 40X           | 10mm           | 20X & 40X           | 11.5mm & 5.75mm | 30X & 60X           | 11.5mm & 3.8mm  | 40X & 80X           | 5.75 mm & 2.87mm | 62mm             |
| EMZ-130 |                                            |                     |                |                     |                 |                     |                 |                     |                  |                  |
|         | Widefield Zoom 1X to 3X; Zoom Ratio 3      |                     |                | 10X~30X             | 23~7.7mm        | 15X~45X             | 15.4~5.1mm      | 20X~60X             | 11.5~3.8mm       | 90mm             |
|         | With Amplifying Lens                       |                     | 1.5X           | 15X~45X             | 15.3~5.1mm      | 22.5X~67.5X         | 10.3~3.4mm      | 30X~90X             | 7.7~2.5mm        | 54mm             |
| 2X      |                                            |                     | 20X~60X        | 11.5~3.8mm          | 30X~90X         | 7.7~2.6mm           | 40X~120X        | 5.7~2mm             | 35mm             |                  |
| EMZ-845 |                                            |                     |                |                     |                 |                     |                 |                     |                  |                  |
|         | Widefield Zoom .8X to 4.5X; Zoom Ratio 5.6 |                     |                | 8X~45X              | 29~5.1mm        | 12X~67.5X           | 2.2~3.4mm       | 16X~90X             | 16.5~2.5mm       | 90mm             |
|         | With Amplifying Lens                       |                     | 1.5X           | 12X~67.5X           | 19~3.4mm        | 18X~101.25X         | 14.6~2.2mm      | 24X~135X            | 11~1.7mm         | 54mm             |
| 2X      |                                            |                     | 16X~90X        | 16~2.5mm            | 24X~135X        | 11~1.7mm            | 32X~180X        | 8.25~1.25mm         | 35mm             |                  |

# Stereo Stands

## Cat. No. 59A-0080

The Power Pod Holder and focusing block are mounted on a pole type base. A top light port is standard for our Variable Spotlight Illuminator. A reversible black and white, scratch and reagent resistant contrast plate is provided and locked-on with recessed allen-head screw (thumb screw is optional).



### A Stand

## Cat. No. 59A-0081 AR Stand

Same as "A" Stand, except with rigid arm. For use with EMF and EMT Bodies only.



### AR Stand

## Cat. No. 59A-0082 B Stand

Advanced design of the basic lighted stereo stand includes one built in 120V bulb with on/off switch, dual reflection lens system for incident, transmitted or simultaneous illumination and adjustable mirror for incident light. A fully rotatable mirror for transmitted light provides darkfield illumination when the blue filter is removed from the stage insert.

Absolutely the most effective and **versatile** 120V stereo stand available. For use with EMF and EMT bodies only.

### B Stand "NEW"



## Cat. No. 59A-0084 L Stand

Same as specifications as our "Patent Pending" M Stand, with the added convenience of built in 6V. high intensity variable illumination and a dual reflection lens system for incident, transmitted or simultaneous illumination. The performance of this illumination system is comparable to systems using high intensity spot illuminators. This stand incorporates a second adjustable doveway to accommodate all power bodies and amplifying lenses allowing working distances from 30mm to 200mm. Truly the most versatile and sophisticated stereo stand to date.

Patent Pending

### L Stand "NEW"



## Catalog No. 59.A-0083 P Stand

Same as B Stand except focus block is mounted on pole to accommodate all power bodies.

## Cat. No. 59A-0088

Our exclusive Mirror Base Stand is designed to be the most versatile mirror-type stand on the market today. It is equipped with a reversible mirror (clear/diffused) mounted on a **Sliding Adjustable Mount**. Positioning of the mirror on the Sliding Mount will provide either a bright-field or darkfield effect. Top and bottom ports are provided for our Parco Variable Spotlight Illuminator (59A-2000).

### M Stand

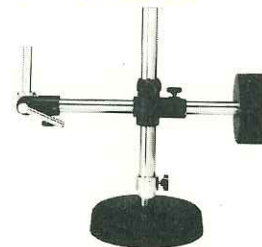


Patent Pending

## Cat. No. 59A-0090

Our Universal Stand is equipped with a counterbalanced arm to assure perfect balance. Movement through 5 planes provides broad horizontal and vertical movement. A port is provided for the Variable Spotlight Illuminator (59A-2000). Includes "F" Focus Block below.

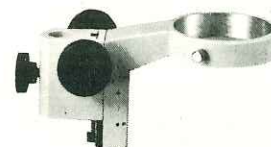
### U Stand



## Cat. No. 59A-0092

The Focusing Block with Pod Holder may be purchased separately for special applications.

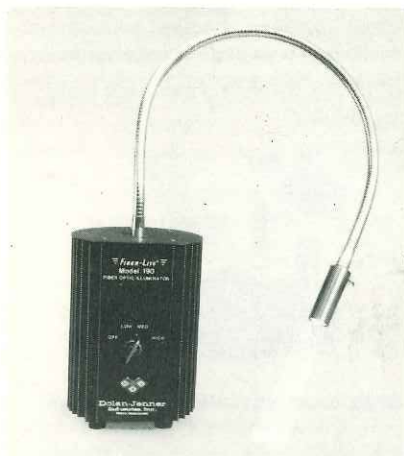
### F Focus Block



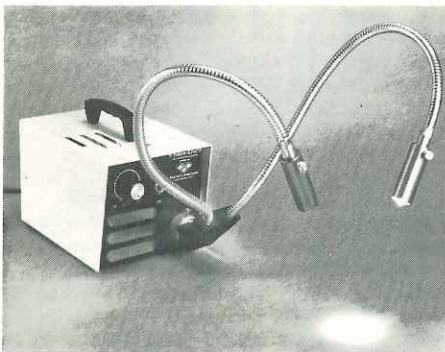
# Accessories for Widefield EM Stereo Series

## Illumination

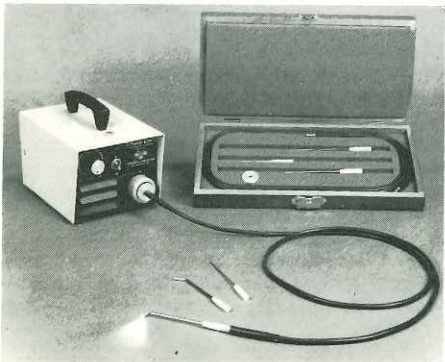
### Fiber Optics Systems



**59A-1000. System 190-1.** Provides illumination levels equal to 15,000 foot candles at 3 in. Equipped with single 26 in. gooseneck fiber optic and lens.



**59A-1010. System 181-1.** Provides 40,000 foot candles of illumination at 3 in. Equipped with dual self-supporting fiber optic (23 in.) and lenses. This system is recommended for applications that require up to 200X magnification when the absolute minimum specimen vibration transfer is essential.



**59A-1020. System 177-1.** Provides an assortment of four straight miniature probes varying in diameter from 0.043 to 0.048 in. Two probes with 45° and 90° bends at the tip with an OD of 0.109 are included. Probes are interchangeable on the 68" silicone sheathed fiber optic. The probes supply illumination to small, deep orificed recessed parts or areas usually difficult to illuminate and inspect. Probes and fiber optic are autoclavable for biological applications.

**59A-1022. Lt-7. Lite Pipes.** Set only. 5 Lite Pipes as described above in wooden case.

**59A-1030. System 360-1, Annular Illumination System.** Provides for crisp visualization or photography of complex, three dimensional specimens without shadow, obstruction, excessive glare, or uneven light distribution. This system mounts to the power pod of all Parco Stereo Microscopes to give an annulus configuration to supply 360° of brilliant, oblique cross, illumination at working distances from 1.5 to 8 in.

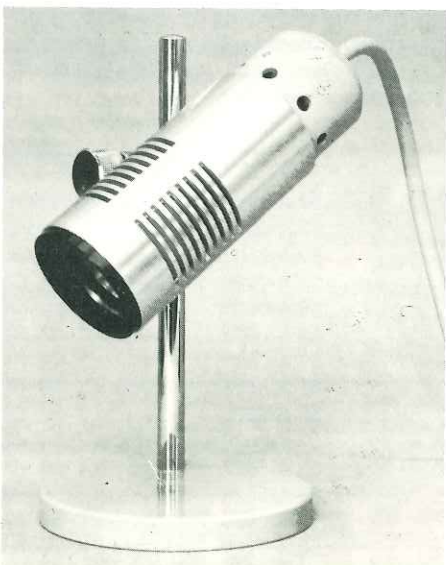
Specific adaptors for mounting the fiber optic to various stereo microscopes are available.



### Standard Illumination Systems



**59A-2000. Variable Voltage Spotlight Illuminator.** Condensing lens pinpoints illumination for detailed examination. Illuminator is mounted on 6.5V, 2.75A transformer with adjustable jackknife linkage. Illuminator housing fits light ports on all Parco Stereo microscopes.



**59A-2010. Free Stand Illuminator.** A high intensity, 110V, 30W daylight illuminator, in a vented, adjustable lamp housing.



**59A-2030. Annular Fluorescent Illuminator.** This 110V fluorescent illuminator provides cool diffused light suitable for low magnification examination of surface details of organisms sensitive to heat.

**59A-2032. Annular Fluorescent Illuminator Adapter.** For EMZ Series.

### Bulbs

**58A-0327.** Replacement bulb, 6.5V-2.75 amp for "L" Stand.

**59A-3020.** 120V, 20W replacement bulb for B&P Stands.

**59A-3190.** System 190-1 replacement bulb, 150 W. Quartz Halogen Type EKZ.

**59A-3180.** System 181-1 replacement bulb, 150 W. Quartz Halogen Type EKE.

**59A-3182.** System 181-1 replacement bulb. Provides 60-75% more light than standard EKE bulb above. Type EJV.

**59A-3206.** Replacement 6V bulb for variable voltage spotlight illuminator. 59A-2000.

**59A-3210.** Replacement 30W bulb for free standing illuminator 59A-2010.

**59A-3230.** Replacement fluorescent tube for annular fluorescent illuminator 59A-2030.

**59A-0800.** Dust Cover.

**59A-0810.** Carrying Case.

# Accessories for Widefield EM Stereo Series

## Eyepieces

- 59A-0100.** Standard 10X Widefield Eyepiece. Each.
- 59A-0102.** Standard 15X Widefield Eyepiece. Each.
- 59A-0110.** Super Widefield 10X Eyepiece. This eyepiece is of exceptional high quality and corrected for superior image flatness. Each.
- 59A-0115.** Super Widefield 15X Eyepiece. Each.
- 59A-0120.** Super Widefield 20X Eyepiece. Each.
- 59A-0150.** Super Widefield 5X Eyepiece. Each.
- 59A-0200.** Eyepiece Shield. Pair.

## Eyepiece Micrometers



- 59A-0300.** Cross-line.
- 59A-0305.** 5mm divided into 100 units.
- 59A-0310.** 10mm divided into 100 units.
- 59A-0330.** 10mm square divided into 100 squares.
- 59A-0380.** Eyepiece Pointer.

## Objective Micrometers

- 59A-0400.** 1mm divided into 100 parts.
- 59A-0440.** 1mm square divided into 100 squares.

## Amplifying Lenses

### For EMT Power Bodies

- 59A-0515.** 1.5X Amplifying Lens for EMT-204 Power Body.
- 59A-0520.** 2X Amplifying Lens for EMT-204 Power Body.
- 59A-0500.** Adapter Ring to adapt lenses above for use on EMT-102 and EMT-103 Power Bodies.
- 59A-0517.** 1.5X Amplifying Lens for EMT-102 and EMT-103 Power Bodies only.

**Note:** Amplifying Lenses are not available for the EMF Fixed Power Bodies.

## Amplifying Lenses

### For EMZ-ZOOM Power Bodies

- 59A-0555.** 0.5X Amplifying Lens. Reduces total magnification by half, but greatly increases working distance to 150mm. For use on EMZ-130, EMZ-845, and EMZ-846 Bodies.
- 59A-0565.** 1.5X Amplifying Lens. For use on EMZ-130, EMZ-845, and EMZ-846 Bodies.
- 59A-0575.** 2X Amplifying Lens. For use on EMZ-130, EMZ-845, and EMZ-846 Bodies.
- 59A-0550.** Protective Window Adapter.

## Stages



- 59A-0780.** Polarizing Attachment Set. For observation of interference color and measurement of extinction angle of geological specimen. Consists of graduated rotatable stage with polarizer and analyzer.



- 59A-0787.** Dark Field Attachment. For grading and appraising gems and study of transparent specimens such as protozoans. Used with Gem Clamp your stereo is made into a Jewel scope.

## Stages

- 59A-0700.** Black and white scratch-and-acid resistant stage plate. 95mm diameter.
- 59A-0705.** Translucent acrylic scratch-and-acid resistant stage plate. 95mm diameter.
- 59A-0710.** Translucent glass stage plate. 95mm diameter.



- 59A-0720.** Graduated Mechanical Stage. Provides 50mm x 75mm X-Y travel. Graduated in 0.1mm increments. Coaxial control knobs simplify operation.



- 59A-0725.** Ungraduated (Wafer) Stage. Transparent glass, platform type (moves 100mm in Y-direction and 100mm in X-direction) stage for examination of wafers and masks.



- 59A-0785.** Specimen (Gem) Clamp. Adjustable for holding and positioning small specimens for stereoscopic observation.

## Camera Attachments for Parco Microscopes

- |           |                                                  |
|-----------|--------------------------------------------------|
| 59.A-0600 | Camera Adapter for ATM (27mm Tube)               |
| 59.A-0601 | Camera Adapter for EM (33mm Tube)                |
| 59.A-0602 | Camera Adapter for Trinocular Models (25mm Tube) |
| 59.A-0620 | Camera T-Mt. Cannon, T2-1                        |
| 59.A-0621 | Camera T-Mt. Minolta, T2-2                       |
| 59.A-0622 | Camera T-Mt. Pentax-K, T2-3                      |
| 59.A-0623 | Camera T-Mt. Pentax-S, T2-4                      |
| 59.A-0624 | Camera T-Mt. Nikon, T2-5                         |
| 59.A-0625 | Camera T-Mt. Olympus, T2-6                       |
| 59.A-0626 | Camera T-Mt. Contax, T2-7                        |
| 59.A-0627 | Camera T-Mt. Konica, T2-8                        |
| 59.A-0628 | Camera Screw Mount, T2-9                         |
| 59.A-0630 | Camera C-Mt. for T.V.                            |
| 58.X-0210 | Photo Eyepiece 2.5X                              |
| 58.A-0215 | Photo Eyepiece 5X                                |

# Model Maker Chart

|                  |                                                                                                                                    |                                                                                                                                      |                                                                                                                                                  |                                                                                                                                                            |                                                                                                                                         |
|------------------|------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| POWER POD BODIES | <b>EMF 001-</b><br><br><b>Fixed 1X Power Body</b> | <b>EMT 102-</b><br><br><b>Turret 1X and 2X Body</b> | <b>EMT 204-</b><br><br><b>Turret 2X and 4X Body</b>            | <b>EMZ 846-</b><br><br><b>Trinocular Widefield-Zoom .8X - 4.5X Body</b> |                                                                                                                                         |
|                  | <b>EMF 002-</b><br><br><b>Fixed 2X Power Body</b> | <b>EMT 103-</b><br><br><b>Turret 1X and 3X Body</b> | <b>EMZ 130-</b><br><br><b>Widefield-Zoom 1X-3X Body</b>        | <b>EMZ 845-</b><br><br><b>Widefield-Zoom .8X-4.5X Body</b>              |                                                                                                                                         |
| EYEPIECES        | <b>-01</b><br><br><b>10X Standard</b>             | <b>-10</b><br><br><b>10X Super Widefield</b>        | <b>-15</b><br><br><b>15X Super Widefield</b>                   | <b>-20</b><br><br><b>20X Super Widefield</b>                            |                                                                                                                                         |
|                  | <b>A</b><br><br><b>Pole Stand No Illumination</b> | <b>AR</b><br><br><b>Arm Stand No Illumination</b>   | <b>B</b><br><br><b>Dual Reflection Stand 120V. Illumination</b> | <b>L</b><br><br><b>Dual Reflection Stand 6V. 12 Amp Illurr</b>           | <b>M</b><br><br><b>Mirror Stand Reflected Illum.</b> |

★Example: EMZ 845 + -10 + A = Model No. EMZ 845-10 A  
(Body) (Eyeieces) (Stand)

## SUGGESTED MODELS

| CATALOG NO. | MODEL NO.  | POWER BODY | EYEPIECE               | STAND |
|-------------|------------|------------|------------------------|-------|
| 59.B-0110   | EMF001-01A | EMF-001    | 10X Standard locked-in | A     |
| 59.B-0112   | EMF001-01B | EMF-001    | 10X Standard locked-in | B     |
| 59.B-0210   | EMF002-01A | EMF-002    | 10X Standard locked-in | A     |
| 59.B-0212   | EMF002-01B | EMF-002    | 10X Standard locked-in | B     |
| 59.B-1210   | EMT102-01A | EMT-102    | 10X Standard locked-in | A     |
| 59.B-1212   | EMT102-01B | EMT-102    | 10X Standard locked-in | B     |
| 59.B-0310   | EMT103-01A | EMT-103    | 10X Standard locked-in | A     |
| 59.B-1312   | EMT103-01B | EMT-103    | 10X Standard locked-in | B     |
| 59.B-1314   | EMT103-01L | EMT-103    | 10X Standard locked-in | L     |
| 59.B-2412   | EMT204-01B | EMT-204    | 10X Standard locked-in | B     |
| 59.B-3013   | EMZ130-01P | EMZ-130    | 10X Standard locked-in | P     |
| 59.B-3023   | EMZ130-15P | EMZ-130    | 15X Standard locked-in | P     |
| 59.B-3040   | EMZ130-10A | EMZ-130    | SWF 10X                | A     |
| 59.B-3044   | EMZ130-10L | EMZ-130    | SWF 10X                | L     |
| 59.B-3045   | EMZ130-10M | EMZ-130    | SWF 10X                | M     |
| 59.B-4513   | EMZ845-10B | EMZ-845    | 10X Standard locked-in | P     |
| 59.B-4540   | EMZ845-10A | EMZ-845    | SWF 10X                | A     |
| 59.B-4544   | EMZ845-10L | EMZ-845    | SWF 10X                | L     |
| 59.B-4545   | EMZ845-10M | EMZ-845    | SWF 10X                | M     |
| 59.B-4640   | EMZ846-10A | EMZ-846    | SWF 10X                | A     |
| 59.B-4644   | EMZ846-10L | EMZ-846    | SWF 10X                | L     |
| 59.B-4645   | EMZ846-10M | EMZ-846    | SWF 10X                | M     |

Additional models may be combined from the model chart above.

WARRANTY: Parco will repair or replace any instrument found to be defective for a period of five years from the date of the original purchase.

DESIGN CHANGE: Due to technological and manufacturing advances, we reserve the right to make design modifications and/or improvements without notice.

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## **PARCO**

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